



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION
Current Authorization : FCC WEB Reproduction
Unofficial Copy

Name: AT&T CORP.

Call Sign: E980493
File Number: SES-MOD-20170214-00161

Authorization Type: Modification of License
Common Carrier Grant Date: 02/15/2017 Expiration Date: 05/29/2026

Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
1)	1	RD #3 BOX 49 (Roaring Crk) CATAWISSA, COLUMBIA, PA, 17820	40° 53' 39.3" N	76° 26' 19.8" W	292.6	83	

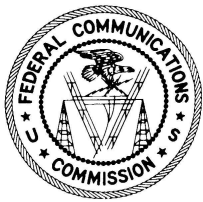
Licenses certify antenna(s) comply with gain patterns specified in Section 25.209

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning Sunday, May 29, 2011 (3 AM Eastern Standard Time) and ending Friday, May 29, 2026 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is Thursday, February 15, 2018 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.
The General Provision 1900 applies to all transmitting frequency bands.
For the text of these provisions, refer to Section H.

#	Frequency	Polarization	Emission	Tx/Rx Mode	Max EIRP /Carrier	Max EIRP Density	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	5925.0000 - 6425.0000	L,R	36M0G7W	T	90.80	51.20	1		QPSK, DATA FEC 3/4, FDMA
2)	5925.0000 - 6425.0000	L,R	1M85G7W	T	81.70	54.80	1		QPSK, DATA, FEC 1/2, IBS
3)	5925.0000 - 6425.0000	L,R	1M54G7W	T	81.20	54.90	1		QPSK, DATA FEC 3/4, IDR
4)	5925.0000 - 6425.0000	L,R	1M24G7W	T	80.30	55.10	1		QPSK, DATA FEC 3/4, IBS
5)	5925.0000 - 6425.0000	L,R	205KG7W	T	72.30	54.90	1		QPSK, DATA FEC 3/4, IBS
6)	5925.0000 - 6425.0000	L,R	44K8G7W	T	65.90	55.50	1		QPSK, DATA FEC 3/4, IBS
7)	5850.0000 - 5925.0000	L,R	205KG7W	T	72.30	54.90	1		QPSK, DATA FEC 3/4, IBS
8)	5850.0000 - 5925.0000	L,R	1M24G7W	T	80.30	55.10	1		QPSK, DATA FEC 3/4, IBS
9)	5850.0000 - 5925.0000	L,R	1M54G7W	T	81.20	54.90	1		QPSK, DATA FEC 3/4, IDR
10)	5850.0000 - 5925.0000	L,R	1M85G7W	T	81.70	54.80	1		QPSK, DATA FEC 3/4, IBS
11)	5850.0000 - 5925.0000	L,R	36M0G7W	T	90.80	51.20	1		QPSK, DATA FEC 3/4, FDMA
12)	5850.0000 - 5925.0000	L,R	44K8G7W	T	65.90	55.50	1		QPSK, DATA FEC 3/4, IBS
13)	3700.0000 - 4200.0000	L,R	205KG7W	R			1		QPSK, DATA FEC 3/4, IBS
14)	3700.0000 - 4200.0000	L,R	44K8G7W	R			1		QPSK, DATA FEC 3/4, IBS



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15) 3700.0000 - 4200.0000	L,R	1M24G7W	R	1	QPSK, DATA FEC 3/4, IBS		
16) 3700.0000 - 4200.0000	L,R	1M54G7W	R	1	QPSK, DATA FEC 3/4, IDR		
17) 3700.0000 - 4200.0000	L,R	1M85G7W	R	1	QPSK, DATA FEC 3/4, IBS		
18) 3700.0000 - 4200.0000	L,R	36M0G7W	R	1	QPSK, DATA FEC 3/4, FDMA		
19) 3625.0000 - 3700.0000	L,R	36M0G7W	R	1	QPSK, DATA FEC 3/4, FDMA		
20) 3625.0000 - 3700.0000	L,R	1M85G7W	R	1	QPSK, DATA, FEC 1/2, IBS		
21) 3625.0000 - 3700.0000	L,R	1M54G7W	R	1	QPSK, DATA FEC 3/4, IDR		
22) 3625.0000 - 3700.0000	L,R	1M24G7W	R	1	QPSK, DATA FEC 3/4, IBS		
23) 3625.0000 - 3700.0000	L,R	205KG7W	R	1	QPSK, DATA FEC 3/4, IBS		
24) 3625.0000 - 3700.0000	L,R	44K8G7W	R	1	QPSK, DATA FEC 3/4, IBS		
25) 5925.0000 - 6425.0000	H,V	36M0G7W	T	85.43	45.89	2	DIGITAL DATA CARRIER
26) 5925.0000 - 6425.0000	H,V	46K8G7W	T	65.08	54.40	2	DIGITAL DATA CARRIER
27) 3700.0000 - 4200.0000	H,V	36M0G7W	R	2	DIGITAL DATA CARRIER		
28) 3700.0000 - 4200.0000	H,V	46K8G7W	R	2	DIGITAL DATA CARRIER		

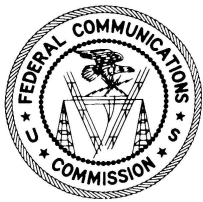
C) Frequency Coordination

#	Frequency Limits(MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	5850.0000 - 6425.0000	4.6W-148.2W		5.0 - 5.5		102.1 - 257.4		10.95	1
2)	3700.0000 - 4200.0000	4.6W-148.2W		5.0 - 5.5		102.1 - 257.4			1
3)	5850.0000 - 6425.0000	4.6W-148.2W		5.0 - 5.5		102.1 - 257.4		11.34	1
4)	3625.0000 - 4200.0000	4.6W-148.2W		5.0 - 5.5		102.1 - 257.4			1
5)	5925.0000 - 6425.0000	10.0W-60.0W		9.0 - 39.8		105.9 - 155.7		3.87	2
6)	3700.0000 - 4200.0000	10.0W-60.0W		9.0 - 39.8		105.9 - 155.7			2

D) Point of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to Permitted Space Station List
- 2) 1 to PANAMSAT 1R (PAS-1R) @ 45.0 W.L. (U.S.-licensed domestic satellite)
- 3) 1 to PANAMSAT-3R (PAS-3R @ 43.0 W.L.) satellite(s) of the PANAMSAT system. (U.S.-licensed)



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E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (Meters)	Manufacturer	Model Number	Site Elevation	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	1	1	18.3	VERTEX	18.3 KPC	292.6	21.3 AGL/ 313.9 AMSL	
Max Gains(s):56.3 dBi @ 4.0000 GHz 60.0 dBi @ 6.0000 GHz								
Maximum total input power at antenna flange (Watts) = 3221.0								
Maximum aggregate output EIRP for all carriers (dBW)95.08								
1	2	1	16.4	VERTEX	16.4 METER	292.6	16.4 AGL/ 309.01 AMSL	
Max Gains(s):55.1 dBi @ 4.0000 GHz 58.9 dBi @ 6.0000 GHz								
Maximum total input power at antenna flange (Watts) = 450.0								
Maximum aggregate output EIRP for all carriers (dBW)85.43								

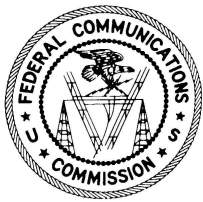
G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- | | |
|------|---|
| 1010 | Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations. |
| 1900 | Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference. |
| 2600 | No protection from interference caused by other radio stations will be provided for these operations. |
| 2641 | The provision of purely domestic service via the INTELSAT satellites is prohibited. |
| 2916 | Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines. |
| 3219 | All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5). |
| 3428 | This authorization is not to be construed as including any uplink or downlink authority in other countries. |
| 3465 | This authorization is subject to the policies adopted in the Report and Order, "Amendment of the Commission's Regulatory Policies to allow Non-US-Licensed Space Stations to provide Domestic and International Satellite Services in the United States," IB Docket 96-111, FCC 97-399 (Released November 26, 1997). (DISCO II) |



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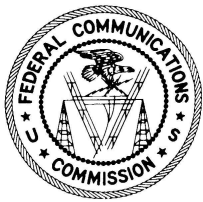
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H) Special and General Provisions

- 5012 The authority granted here is limited to the operation of the facilities described above and does not include any authority to install and operate channelizing equipment or any other authority under Section 214 of the Communications Act of 1934, as amended, to establish channels of communications.
- 5013 In the event of the failure of a satellite with which operations are authorized in Section D of this license, operations are authorized in conjunction with the authorized INTELSAT satellite in the affected Ocean Region that provides the services authorized herein in order to maintain the continuity of commercial service; provided that the licensee(s) immediately notify the Commission of the nature of this emergency and its expected duration; and provided that the operational limits of elevation angle and azimuth range specified in Section C of this license are not exceeded. In the event that such emergency operations require emissions not specified in Section B of this license, such emissions may be utilized provided that the EIRP's of such emissions do not exceed the limits set forth in this license.
- 5014 With respect to potential co-channel interference to or from terrestrial microwave radio stations, the transmit and receive frequency bands listed in this license have been cleared for transmissions to and from satellites located in the geostationary or non-geostationary orbit for the emissions designated in Section B of this license.
- 5015 Upon completion of construction, each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 and that the station is operational including the date of commencement of service and will remain operational during the license period unless the license is submitted for cancellation.
- 5017 Operation of this station is governed by the terms, conditions and limitations in Part 25 of the Commission's Rules and Regulations and the following additional conditions: 1. This license shall not vest in the Licensee(s) any right to operate the station or any right in the use of the frequencies designated in the license beyond its term or in any other manner than authorized in the license; 2. Neither the license nor the right granted under it shall be assigned or otherwise transferred in violation of the Commissions or otherwise transferred in violation of the Communications Act of 1934, as amended, or the Commission's Rules and Regulations issued under it; and 3. This station is subject to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended.
- 5018 This license shall be forfeited automatically if this station is not ready for operation within the time specified unless, prior to the expiration date of this license, the Commission receives an Application for Additional Time to Construct a Radio Station (FCC Form 701) filed by the Licensee(s) showing good cause why the Licensee(s) could not complete construction on time.
- 5032 The extended C-band frequency 5850-5925 MHz has been cleared with the National Telecommunications & Information Administration. This frequency band is for INTELSAT use only.
- 5202 Use of this facility to provide international service on a common carrier basis will require appropriate authorization under Section 214 of the Communication Act of 1934, as amended.
- 5240 All operations via the INTELSAT satellites are limited to the countries excluding the restricted countries listed in Comsat's international tariff provisions for the space components of authorized services in Section B..
- 5525 This authorization is issued pursuant to the Commission's Report and Order released January 22, 1996 (FCC 96-14), Disco I.
- 5630 International services shall be consistent with this emission designator, the underlying title III application(s) and the acquisition of any necessary Section 214 authority.
- 5711 The extended C-band frequency band 3625-3700 MHz has been cleared with the National Telecommunications and Information Administration. This frequency band is for INTELSAT use only.
- 5723 All communications shall be in accordance with the satellites and services which have completed any necessary technical consultations under Article XIV (d) of the INTELSAT Agreement and which the Commission has approved.
- 5736 Licensee is authorized to provide fixed-satellite service other than Direct-to-Home service via non-U.S. licensed satellites.



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H) Special and General Provisions

5859 The 3650-3700 MHz band is shared on a co-primary basis in three Federal Government radiolocation systems identified in US348. Unacceptable interference may be caused to this earth station from these three radiolocation systems operating in the frequency band. Consistent with the applicant's EMC analysis (as required by US348 and based on the NTIA TR-99-361 Report, Technical Characteristics of Radiolocation Systems operating in the 3.1-3.7 GHz Band and Procedures for assessing EMC with Fixed Earth Station Receivers (available at <http://www.ntia.doc.gov/osmhome/reports.html>), the licensee accepts this potential for unacceptable interference from the three stations identified in US348. In the case that out-of-band interference does occur, the licensee is further aware that use of a RF filter ahead of the low noise amplifier (LNA) will limit potential out-of-band interference to its receiving earth station. Additionally, per US 245, in the band 3650-3700 MHz, these fixed-satellite service operations are limited to international inter-continental satellite systems.



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H) Special and General Provisions

B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station does not meet each required construction deadline by the required date of completion unless, before such date(s), a specific application is timely filed to request an extension of the construction deadline(s), supported with good cause why that failure to construct by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulates is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993". These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.